

Minh-Quy Pham

Scientific Curriculum Vitæ



Personal Information

Address Department of Mathematics, Virginia Tech, Virginia, USA
E-mail mqpham@vt.edu
Website quyphammaths.com

Position

2026–Now **Patricia Caldwell Postdoctoral Fellow**, *Department of Mathematics, Virginia Tech, USA*

Education

- 2022–2026 **PhD student in Mathematics**, *University of Rochester, New York, USA*
○ Advisor: Prof. Alex Iosevich.
○ Co Advisor : Prof. Allan Greenleaf
- 2022–2024 **Master Degree in Mathematics**, *University of Rochester, New York, USA*
- 2020–2022 **Research projects**, *Problems in Combinatorics, Discrete Geometry and Geometric measure theory*
○ Advisor: Prof. Thang Pham.
- 2016–2019 **Master Degree in Mathematics**, *Dalat University, Dalat, Vietnam*
○ Thesis: *Bounds for volumes of sub-level sets and the decay of oscillatory integrals with phase functions definable in o-minimal structures.*
○ Advisor: Assoc. Prof. Ta Le Loi
- 2012–2016 **Bachelor Degree in Mathematics**, *Dalat University, Dalat, Vietnam*
○ Thesis: *Thom's transversality theorem and its applications*
○ Advisor: Assoc. Prof. Ta Le Loi

Research Interests

Harmonic Analysis, Geometric Measure Theory, Fractal Geometry, Combinatorics, Incidence Geometry

Publications and preprints

1. *On Hausdorff dimensions of k -point configuration sets and Elekes-Rónyai type theorems*, submitted, *arXiv:2603.03567*.
2. *On Falconer type functions and the distance set problem*, **Math. Ann.** 395 (2026).
3. *L^p -integrability of functions with Fourier supports on fractal sets on moment curve*, with S. Duan and D. Ryou, **J. Funct. Anal.** 289 (2025), no. 12.
4. *Packing sets in Euclidean space by affine transformations*, with A. Iosevich, P. Mattila, E. Palsson, T. Pham, S. Senger, and C-Y. Shen (2024), submitted, *arXiv:2405.03087*.
5. *Pinned simplices and connections to product of sets on paraboloids*, with A. Iosevich, T. Pham, and C-Y. Shen, **Indiana Univ. Math. J.** 74 (2025), no.3.

6. *Discretized sum-product type problems: Energy variants and Applications*, with T. Pham, and C-Y. Shen (2022), submitted, *arXiv:2211.02277*.
7. *Structural theorems on the distance sets over finite fields*, with D. Koh and T. Pham, **Forum Math.** 35 (2023), no.4, 925–938.
8. *On the k -resultant modulus set problem on varieties over finite fields*, **Int. J. Number Theory** 19 (2023), no.3, 569–579.
9. *Bound for volumes of sub-level sets of polynomials and applications to singular integrals*, with Loi Ta Le, *Dalat University Journal of Science*, **12**(2), 26–39, (2022).

Talks

1. International Conference On Fractals And Related Areas 2026, UBC., May 1-2, 2026.
Fourier Integral Operators, Point Configurations, and Elekes-Rényai Type Problems
2. Vertical Integration workshop, University of Rochester., April 16-19, 2026.
Fourier Integral Operators, Point Configurations, and Elekes-Rényai Type Problems
3. Special Session “New Directions in Geometric measure theory and Effective Methods” JMM 2026, Washington D.C., January 4–7, 2026.
Packing sets in Euclidean space by affine transformations
4. Special Session “Recent Advances in Harmonic Analysis with applications to Discrete Analysis and Geometric Measure Theory”, JMM 2026, Washington D.C., January 4–7, 2026.
On the Falconer type functions and the distance set problems
5. Analysis and Math Physics Seminar, Virginia Tech, December 10, 2025.
On the Falconer type functions and the distance set problems
6. Graduate student seminar, Department of Mathematics, University of Rochester, October 24, 2025.
On the Falconer type functions and the distance set problems
7. Reading Group and Research Group in Analysis 2025, University of Pennsylvania, August 4–15, 2025.
On the Falconer’s distance set problem in the plane
8. The 5th International Conference “Mathematics of the Central Region and Central Highlands in 2024”, Nha Trang, Vietnam, August 23–25, 2024.
Packing sets in Euclidean space by affine transformations
9. Conference – Madison Lectures in Harmonic Analysis 2024, University of Wisconsin–Madison, WI, May 13–17, 2024.
Packing sets in Euclidean space by affine transformations (poster)
10. Special Session on Harmonic Analysis and Incidence Geometry, 2024 AMS Spring Central Sectional Meeting, University of Wisconsin–Milwaukee, Milwaukee, WI, April 20–21, 2024.
Packing sets in Euclidean space by affine transformations
11. The Korea–Taiwan–Vietnam Joint Meeting on Discrete Geometry and Geometric Measure Theory, VIASM, Vietnam, July 17–19, 2023.
Pinned simplices and connections to product of sets on paraboloids
12. Conference Algebra–Number theory–Geometry–Topology of Vietnam, Vung Tau, Vietnam, December, 2019.
Bounds for volumes of sub-level sets of polynomials and applications

School/Seminar/Workshop

1. Special Session “Recent Advances in Harmonic Analysis with applications to Discrete Analysis and Geometric Measure Theory”, JMM 2026, Washington D.C., January 4-7, 2026

2. Reading and Research Groups in Analysis 2025, University of Pennsylvania, Philadelphia, PA., Aug 3-15, 2025.
3. Madison Lectures in Harmonic Analysis 2024, University of Wisconsin-Madison, WI, USA, May 13-17, 2024.
4. Special Session on Harmonic Analysis and Incidence Geometry, 2024 AMS Spring Central Sectional Meeting, University of Wisconsin-Milwaukee, Milwaukee, WI, USA, Apr 2024.
5. Pittsburgh Links among Analysis and Number Theory (PLANT24), University of Pittsburgh and Carnegie Mellon University, Pittsburgh, USA, Mar 2024.
6. The Korea-Taiwan-Vietnam Joint Meeting on Discrete Geometry and Geometric Measure Theory, VIASM, Hanoi, Vietnam, Jul 2023.
7. Harmonic Analysis and Fractal Sets, The Ohio State University, Ohio, USA, March 2023.
8. Vietnam-USA joint mathematical meeting, Quy Nhon, Vietnam, 2019.
9. The 6th Franco-Japanese-Vietnamese Symposium on Singularities, Nha Trang, Vietnam, Sep 2018.
10. Singularities and Algebraic Geometry, Danang, Vietnam, Jan 2018.
11. The 5th Franco-Japanese-Vietnamese Symposium on Singularities, Kagoshima, Japan, Oct 2017.

Teaching

	Semester	Course and Role
2025	Fall	MATH 161 - Calculus IA (Instructor)
	Summer	MATH 165 - Linear Algebra and Differential Equations (Instructor)
	Spring	MATH 162 - Calculus IIA (Instructor)
2024	Fall	MATH 164 - Multidimensional Calculus (TA)
	Summer	MATH 142 - Calculus II (Instructor)
	Spring	MATH 437 - Algebra II (TA), MATH 430 - Probability (TA)
2023	Fall	MATH 164 - Multidimensional Calculus (TA)
	Summer	MATH 143 - Calculus III (TA)
	Spring	MATH 141 - Calculus I (TA)
2022	Fall	MATH 265 - Functions of a real variable (TA)

Mentoring

1. VIASM Summer school "Research Experience for Undergraduates" 2024: Lecturer, Mentor, 2024.
<https://viasm.edu.vn/en/hdkh/VIASM-REU-2024>
2. Vietnam Polymath REU:Secretary, Mentor, 2022-now.
<https://www.vietnampolymathreu.com/>

Last update: August 4, 2026